Courthouse Wash Interagency Restoration Initiative Phase 2

Project ID: 3572
Status: Current
Fiscal Year: 2017
Submitted By: N/A
Total Acres: 957

Project Manager: Eli Tome
PM Agency: Utah Division of Forestry, Fire & State Lands
PM Office: Southeastern Area
Lead: Utah Division of Forestry, Fire & State Lands
WRI Region: Southeastern

Description:

This project involves a continuation of riparian restoration efforts within the Courthouse Wash Watershed with the mechanical and manual removal of invasive species such as tamarisk and Russian olive. This project also covers herbicide applications and pile burning as needed.

Location:

This project is located within Courthouse Wash Watershed, situated just north of Moab . The land owners and land managers in this area include the Bureau of Land Management, the National Park Service, the Utah Division of Forestry, Fire and State Lands, the School and Institutional Trust Lands Administration, as well as several parcels of private land. This project is entirely located within a WRI conservation focus area related to riparian resources.

PROJECT NEED

Need For Project:

This project is a continuation of the previous WRI-funded project number 3342 'Restoration of Riparian Lands and Wetlands in Courthouse Wash' submitted last year by Ann Marie Aubry from the Bureau of Land Management. As stated in this previous project proposal, Courthouse Wash has been identified by the Southeast Utah Riparian Partnership as a priority watershed for restoration due to the encroaching invasive species and associated ecological problems related to Tamarisk and Russian Olive. The geomorphic setting of Courthouse Wash along with climate and a multitude of other factors makes the watershed particularly susceptible to tamarisk and Russian olive encroachment, as evident by the number of invasive trees that have grown within the watershed.

Tamarisk continues to channelize Courthouse Wash, disrupting the natural planform of the river throughout the watershed. This has consequences for native plant communities and wildlife alike, as certain wetland areas dry up and the threat of wildfire continues to grow. Tamarisk has limited the human and wildlife uses along the waterways and now dominates the riparian areas within this watershed.

The Tamarisk beetle (Diohabda sp.) has had an essential role controlling Tamarisk in the area since 2004, but it's now time to consider ways to further watershed restoration through continued action. The release of the beetle almost 11 years ago was a great first step that necessitates continued treatment of invasive tree species in the watershed to remove dead and stressed tamarisk as well as Russian olive trees. The dieback of tamarisk throughout the watershed has now given opportunity to Russian olive to become the next big concern in terms of riparian restoration. We believe that the Courthouse Wash watershed can be 80% tamarisk free in 8 years through a collaborative approach to restoration with a partnership between FFSL, BLM, SITLA, NPS, Grand County and multiple private landowners.

The NPS has been working in lower Courthouse Wash to control non-native woody species since 2003, which increases the urgency for removal of tamarisk higher in the watershed, to stop the spread of tamarisk into these areas that the NPS has invested in for nearly 12 years.

Objectives:

This project will continue to treat tamarisk and Russian olive trees throughout Courthouse Wash. Last year, project number 3342 treated approximately 100 acres of BLM lands in addition to monitoring and treating Tamarisk and Russian Olive on 140 previously-treated acres of NPS lands. This year, we plan to monitor and treat any re-sprouts on these lands in addition to treating 170 acres of land in the watershed on State Sovereign Lands, School and Institutional Trust Lands and BLM lands. The areas chosen this year were strategically chosen to be higher in the watershed in order to stop the spread of tamarisk and Russian Olive at the source.

The goal of the project is to remove nearly 80% of the tamarisk in the watershed over the next 8 years, continually monitoring and retreating previously treated areas throughout the lifetime of this project. This year,

the project will concentrate on the upper reaches of the watershed, moving downstream in the subsequent years. We anticipate on hiring Canyon Country Youth Corps crews to treat the areas as well as assist in monitoring and retreatment on other lands.

Treatments this year will be focused first on the reducing the percentage of Russian olive and Tamarisk trees within the watershed. Crews will use the frill cut method to treat all single or isolated Russian olive trees. Trees in dense stands would be manually or mechanically removed, leaving some trees and slash as shade for native vegetation to re-establish.

With the removal of these non-native trees, we anticipate reduced erosion and sedimentation caused by bank stabilization. This will eventually allow for the re-establishment of native xeric vegetation allowing native wildlife species to once again flourish, and for water resources to be better distributed throughout the wash. This in turn will promote more sloping, gentle banks on the wash and will help improve water quality throughout the Colorado River Basin.

Threats / Risks:

Essentially this project is working to both promote native vegetation establishment while helping to encourage a more natural planform of the river which will in turn benefit wildlife and recreational resources throughout the watershed. An added benefit of this project is removing truly massive amount of fuels in the watershed, greatly reducing the risk of catastrophic wildfire in the future. By reducing the fuel availability throughout the watershed, we are helping to protect infrastructure on surrounding private and public lands.

These non-native trees also use an incredible amount of water affecting the natural distribution of water resources throughout the watershed. Without their removal, we could expect to see further diminishing of the small and infinitely important springs and pools throughout the watershed.

Possibly most importantly, this project demonstrates restoration at the watershed or landscape-scale and builds off of nearly 20 years of restoration work in the area. This work will ensure that money invested in previously funded projects (some of which received WRI funding) was well-spent. In essence, this project reinforces the effectiveness of previous projects and maximizes the overall benefit of all these past projects by continuing the work and benefits they brought to the watershed.

Relation To Management Plan:

This project is supported by the management plan for all of the agencies involved including:

The National Park Service

The NPS conducted an Environmental Assessment in 2009 with full compliance before it was approved. In particular, pages 4-5 in chapter 2 outline specific herbicides and management goals which are supported through this WRI proposal. The NPS management plan documents can be found in the documents section of this proposal.

State Sovereign Lands

The Comprehensive Management Plan completed in year 2015 identifies the management of invasive species as a priority in section 2.4 on page 39 of the final plan. Specifically the document states: "Since 2009 the southeast area fire wardens removed 17 acres of tamarisk using the cut, pile and burn method" and further states that "The Utah Noxious Weed Act (Subsection R68-9) dictates weed control on sovereign lands, where all state listed weeds are put in to categories based on the threat of spread and the priority of removal." This indicates that State Sovereign Lands are to be managed for the removal of such noxious weeds. This management plan is once again attached in the documents section of this proposal.

Bureau of Land Management Lands

The attached document at the end of the proposal outlines a list of management plans and objectives which the BLM compiled for project number 3342 for the Courthouse Wash Watershed, as well as another attached document outlining the BLM's management plan compliance for this current WRI project proposal. The BLM has completed the NEPA document and Pesticide Use Plans (PUP) to fully cover this work on BLM lands.

Fire / Fuels:

This project, over the 8 year lifespan, will remove most of the tamarisk, which is largely a dead and dry fuel source, from a total of 800 acres of land. This year, the goal is to remove nearly 170 acres of tamarisk, most of which is dead or stressed.

Water Quality/Quantity:

By removing the tamarisk and Russian Olive from the banks of the riverbed, we will help establish that natural planform of the river to more effectively and naturally distribute water resources throughout the watershed. After the invasive species are removed, passive restoration of native plants will allow more stable and natural drainage conditions to develop throughout the watershed. With more stable and natural conditions, soil erosion and sedimentation rates will be reduced. Decreased erosion and sedimentation rates would be a direct improvement to water quality conditions.

Studies have also shown that Tamarisk and Russian Olive trees use an incredible amount of water. By reducing their abundance more water will be available for native plants and wildlife. This will also help establish water and soil dynamics for the watershed.

Compliance:

The National Park Service

The NPS conducted an Environmental Assessment in 2009 with full compliance before it was approved. In particular, pages 4-5 in chapter 2 outline specific herbicides and management goals which are supported through this WRI proposal. The NPS management plan documents can be found in the documents section of this proposal.

The Bureau of Land Management

An environmental assessment as well as a pesticide use proposal was completed for the project last year. The Decision record number for the EA is DOI-BLM-UT-Y010-2014-0094-EA and the PUP number is (PUP) UTY010-15-003-P. Both documents are attached in the documents section of this proposal.

Methods:

The Canyon Country Youth Corps (CCYC) or a similar work crew would treat Tamarisk and Russian Olive trees by chainsaw cutting or frill cuts, scattering slash or piling the debris to be burned by a FFSL crew or NPS crew in the winter. The crews cutting Tamarisk and Russian Olive will also have licensed herbicide applicators to treat tree stumps immediately after cutting. Photo points will be taken before treatments start, and after the treatment is completed in each area. Photo points will be marked with a GPS point, and will be re-photographed each year throughout the project lifespan.

The top priority this year is to reduce Russian olive from the watershed. Crews will first target areas of known infestations of Russian olives throughout the project area. Single or isolated Russian Olive Trees will be treated using the frill cut method to allow for wildlife habitat as the tree slowly dies. A phased approach is planned for denser stands of tamarisk, removing no more than 30% of the non-native trees during this phase, leaving at least 60% of the existing vegetation and associated multi-storied canopy intact. This phased approach allows for better shading and cooler surface temperatures to promote passive restoration of native vegetation as well as habitat benefits for bird species.

After treating Russian olives throughout the watershed, crews will focus on the removal of tamarisk in high use areas, and areas with cottonwoods and willows. These areas are being targeted to reduce fire risk, and promote the expansion of native vegetation and wildlife habitat. The removal of tamarisk from underneath cottonwood groves will promote the expansion of cottonwoods, and reduce the fire risk. Areas of high recreational use are at risk of human caused fire, which will damage native vegetation habitat areas; therefore these areas will also be targeted.

A small amount of private lands will also be treated through tamarisk removal and Russian olive treatments. This area is upstream of a prior FFSL treatment area, and provides a seed source for tamarisk and Russian olive. By completing treatments in this area, we can reduce the amount of re-sprouts and establishment of nonnative species on State Sovereign Lands in the area.

Tamarisk and Russian Olive will be cut into pieces no longer than four feet and piled in compact piles to ensure pile combustion. This will be done under supervision from staff affiliated with FFSL, BLM or NPS to ensure quality work is completed.

Because of existing patches of native vegetation, there is no plan for active vegetation restoration throughout the project area. Grand County Weed will assist the project in the coming years by providing personnel and equipment to treat noxious weed species as well as re-treatments of Russian Olive frill cuts and re-sprouts from Tamarisk.

Due to the remote nature of the watershed, most of the work will be completed by crews hiking in to the areas using leave-no-trace principles carrying all equipment in to each site from the nearest road. Likely, 4x4 vehicles will be needed to access the roads throughout the watershed.

Herbicides will be used according to label and compliant with NEPA and other regulations which the BLM and

NPS abide by. All herbicides used will have a label indicating suitability for aquatic use.

Monitoring:

Monitoring will be conducted as part of this project to evaluate the success of the treatments and to evaluate any additional treatment needs. Monitoring efforts will be conducted prior to treatment, immediately after treatment, several times over a one year period after treatment and several years later. Baseline data collection will be accomplished in the spring and summer of 2015 including water quality sampling in coordination with UDWQ, macro-invertebrates sampling using National Aquatic Monitoring Center protocols, shallow ground water monitoring, soil sampling, vegetation transects, insects and small mammal trapping, and climate monitoring (rain, air temp, soil temp, etc). Local researchers may conduct bird surveys in coordination with UDWR staff. Other monitoring efforts include assessing which treatments were most successful in order to improve treatment techniques over time. An initial monitoring report will be completed after treatment implementation.

Partners:

FFSL, SITLA, BLM, Grand County Weed, NPS, The Nature Conservancy and private landowners.

Future Management:

This is viewed as a multi-year project and a continuation of a previous WRI project. Each year time and money will be devoted to re-treatments and monitoring of the previous years' work.

Domestic Livestock Benefit:

This area is used as winter grazing grounds, and the removal of Tamarisk may improve access to water as well as more native vegetation to feed the livestock that utilize these lands.

BUDGET

WRI/DWR	Other	Budget Total	In-Kind Total	Grand Total
$53,000.00	$0.00	$53,000.00	$41,900.00	$94,900.00

Item	Description	WRI	Other	In-Kind	Year
Contractual Services	5 weeks of a contracted crew	$42,000.0	$0.00	$0.00	2017
Materials and Supplies	Herbicides and application supplies	$1,000.00	$0.00	$0.00	2017
Personal Services (permanent employee)	FFSL staff time	$0.00	$0.00	$10,000.0	2017
Personal Services (permanent employee)	BLM Seasonal Employee	$0.00	$0.00	$5,000.00	2017
Personal Services (permanent employee)	Fire crew to burn piles	$9,000.00	$0.00	$0.00	2017
Personal Services (permanent employee)	NPS staff time	$0.00	$0.00	$4,263.00	2017
Personal Services (seasonal employee)	NPS staff time	$0.00	$0.00	$5,337.00	2017
Personal Services (permanent employee)	BLM staff time	$0.00	$0.00	$5,000.00	2017
Personal Services (permanent employee)	Grand County Lead Weed Technican	$0.00	$0.00	$1,300.00	2017
Contractual Services	Monitoring from The Nature Conservancy	$0.00	$0.00	$5,000.00	2017
Contractual Services	Monitoring by the BLM	$0.00	$0.00	$5,000.00	2017
Seed (GBRC)	Seed	$1,000.00	$0.00	$0.00	2017
Personal Services (seasonal employee)	BLM Staff Seed Broadcasting	$0.00	$0.00	$1,000.00	2017

FUNDING

WRI/DWR	Other	Funding Total	In-Kind Total	Grand Total
$53,000.00	$0.00	$53,000.00	$41,900.00	$94,900.00

Source	Phase	Description	Amount	Other	In-Kind	Year
FFSL (pre-suppression)	N565	Contractual services, seed and supplies	$53,000.0	$0.00	$0.00	2017

Source	Phase	Description	Amount	Other	In-Kind	Year
FFSL		FFSL staff time	$0.00	$0.00	$10,000.0	2017
NPS		NPS staff time	$0.00	$0.00	$9,600.00	2017
BLM		BLM staff time and monitoring	$0.00	$0.00	$16,000.0	2017
Grand County Weed Department		Grand County Weed Department staff time	$0.00	$0.00	$1,300.00	2017
The Nature Conservancy		Monitoring	$0.00	$0.00	$5,000.00	2017

EXPENSE

WRI/DWR	Other	Expense Total	In-Kind Total	Grand Total
$12,800.00	$0.00	$12,800.00	$4,800.00	$17,600.00

Source	Phase	Description	Amount	Other	In-Kind	Year
FFSL (pre-suppression)	N565	UCC Crew Hired in Fall 2016	$12,800.0	$0.00	$0.00	2017
FFSL		Permanent Staff Supervision and UCC Crew Training time	$0.00	$0.00	$4,800.00	2017
NPS		N/A	$0.00	$0.00	$0.00	
BLM		N/A	$0.00	$0.00	$0.00	
Grand County Weed Department		N/A	$0.00	$0.00	$0.00	
The Nature Conservancy		N/A	$0.00	$0.00	$0.00	

SPECIES

Species	"N" Rank	HIG/F Rank
Southwestern Willow Flycatcher	N1	N/A

Threat	Impact
Invasive Plant Species – Non-native	High

Species	"N" Rank	HIG/F Rank
Peregrine Falcon	N4	N/A

Threat	Impact
Not Listed	NA

HABITATS

Habitat
Aquatic-Scrub/Shrub

Threat	Impact
Camping (Dispersed)	Low
Channel Downcutting (indirect, unintentional)	High
Invasive Plant Species – Non-native	Medium

PROJECT COMMENTS

Comment 01/20/2016 Type: Project Commenter Anthony Wright

I still have a problem with yellow-billed cuckoo substantially benefitting from this project. This species is frequently associated with Russian olive which resembles the dps's primary habitat in riparian thorn scrub in Mexico. With no effort at revegetation, will the lower layer needed for nesting still exist after all the exotics are removed? Also in SE Utah we very infrequently detect cuckoos except near Rivers or well irrigated agricultural lands, so this is not the place one should choose to do a cuckoo project.

Comment 01/25/2016 Type: Project Commenter Eli Tome

Thanks for the feedback, I will take the Cuckoo off of the species list.

Comment 01/21/2016 Type: Project Commenter Jordan Nielson

Removing vegetation without reseeding or replanting with natives could cause increased erosion and bank destabilization. Will anything be done to prevent erosion in the lack of vegetation?

Comment 01/25/2016 Type: Project Commenter Eli Tome

This project proposes to treat woody invasive species throughout the watershed. The majority of this work is cutting isolated trees or small groups of trees that surround native plants such as cottonwood trees. These sites are located in relatively dry areas and the wash banks are fairly low, less than 1-2' tall. There are native plants including grasses and forbes already on site. The cut brush would be cut into short lengths (1-2' long) and scattered nearby which would help stabilize soils and reduce erosion. Since there are native plants currently growing on the treatment sites, natural re-seeding would occur at most places fairly quickly, within a growing season or two. Most treatment sites would be accessed by foot and therefore surface disturbance of each treatment site would be minimal, minimizing additional erosion.and allowing for natural re-vegetation. After reading your comment, we decided to add seeding to our proposal. We propose to hand broadcast seed during the winter and early spring season where needed to assist in natural re-vegetation which is the main protection against accelerated erosion from our project actions.

COMPLETION

Start Date:

End Date:

FY Implemented:
2017

FY Completed:

Final Methods:
N/A

Project Narrative:
N/A

Future Management:
N/A

Map Features

ID	Feature Category	Action	Treatment/Type
4932	Aquatic/Riparian Treatment	Herbicide application	Spot treatment
4932	Aquatic/Riparian Treatment	Vegetation Improvements	Manual removal / hand crew
4933	Aquatic/Riparian Treatment	Herbicide application	Spot treatment
4933	Aquatic/Riparian Treatment	Vegetation Improvements	Manual removal / hand crew